

**REMARKS**

Claims 1-29 are pending in the present application. In the Final Office Action mailed October 2, 2006, the Examiner rejected claim 27 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner next rejected claims 1-3, 6, 18, 19, 23-25, and 27-29 under 35 U.S.C. §102(b) as being anticipated by Duffy et al. (USP 5,685,680). Claims 1-4, 8-13, and 18-24 are rejected under 35 U.S.C. §102(b) as being anticipated by Enright (USP 2,788,233) (Figures 5 and 6). Claims 1-4, 8-13, and 18-24 are rejected under 35 U.S.C. §102(b) as being anticipated by Aversten (USP 2,823,297). Claims 1-3, 6, 7, 18, 19, 23-25, and 27-29 are rejected under 35 U.S.C. §102(b) as being anticipated by Rondeau et al. (USP 3,760,143). Claims 1-29 are rejected under 35 U.S.C. §102(b) as being anticipated by Logan (USP 3,253,115). Claims 1, 2, 6, 7, 18, 23-25, 28, and 29 are rejected under 35 U.S.C. §102(b) as being anticipated by Molyneux et al. (USP 3,891,332). Claims 1-29 are rejected under U.S.C. §103(a) as being unpatentable over Irimes (USP 5,493,833) in view of Franz (EP-1060822) (Figures j and m).

Claim 16 was objected to by the Examiner. Applicant has amended claim 16 to correct antecedence.

In response to the reply filed by Applicant on July 18, 2006, the Examiner maintained all of the rejections previously set forth and, in regards to the rejection under 103(a) over Irimes and Franz, stated that Applicant had not clearly and distinctly addressed how each claim in the present Application defines over the combination of Irimes and Franz and that “pending any further remarks, [it is deemed] there is no disagreement that the rejection is proper.” *Office Action*, October 2, 2006. In regards to the rejection under 103(a) over Irimes and Franz, Applicant believes that the original rejection set forth thereover was unclear as to the exact grounds for the rejection. That is, as Franz is a German language reference, Applicant was unsure what portion of the reference the Examiner was relying on. The Examiner now stated in the Final Office Action of October 2, 2006, that the rejection over the Franz reference was based solely on Figs. 6(j) and 6(m) therein. Applicant was previously unaware of that and therefore could not properly reply because the text is in a foreign language. Applicant appreciates the clarification as to the exact grounds for the 103(a) rejection and its being based only on Figs. 6(j) and 6(m) in Franz. Accordingly, Applicant believes then that the finality of the current Office Action is premature. That is, Applicant believes that the Office Action of April 18, 2006 did not distinctly point out that the Franz reference was relied upon based solely on the figures therein and not on the text of

the specification. Had Applicant been aware of the specific basis for the rejection over Franz, and the Examiner's sole reliance on the figures therein, the previously filed response would have been prepared accordingly. In light of this, Applicant respectfully believes that the finality of the last Office Action was premature and requests that the proposed amendments made herein be entered at this time.

The Examiner rejected claim 1 under 103(a) over Irimies and Franz. Applicant has elected to amend claim 1 to further clarify that which is called for therein. As amended, claim 1 calls for, in part, a welding stud including a second end having a central point on a weld face and at least one ridge and hollow recess formed in the weld face and spaced away from the central point, wherein the central point has a diameter greater than a thickness of the at least one ridge and has a planar surface that is in a common plane with the at least one ridge.

Franz fails to teach, disclose, or suggest a welding stud as called for in claim 1 that includes a second end with a central point that has a diameter greater than a thickness of the at least one ridge on the welding face and has a planar surface that is in a common plane with the at least one ridge. As shown in Figs. 6(j) and 6(m), the end face 13 is a central point that is not in a common plane with the plurality of peaks 15, 17 thereon. Rather, end face 13 extends beyond peaks 15, 17. As such, the combination of Irimies and Franz fails to teach, disclose, or suggest that which is called for in claim 1. Therefore, Applicant respectfully believes that claim 1, and the claims dependent therefrom, are patentably distinct over the cited references.

The Examiner also rejected claim 10 under 103(a) over Irimies and Franz. Applicant has elected to amend claim 10 to further clarify what is called for therein. As amended, claim 10 calls for, in part, a welding stud comprising a weld end constructed to be welded to a workpiece having a plurality of ridges and grooves formed therein, wherein the weld end includes at least one protrusion having a diameter greater than a thickness of each of the plurality of ridges and a planar surface that is in a common plane with the plurality of ridges. As stated above, Franz fails to teach, disclose, or suggest a welding stud that includes a weld end with a protrusion that has a diameter greater than a thickness of each of the plurality of ridges on the welding face and has a planar surface that is in a common plane with the plurality of ridges. *See Franz*, Figs. 6(j) and 6(m). Therefore, Applicant respectfully believes that claim 10, and the claims dependent therefrom, are patentably distinct over the cited references.

The Examiner also rejected claims 18 and 25 over Irimies and Franz. Both claims 18 and 25 call for, in part, a welding stud that includes a weld end that increases resistance and localizes current flow through the weld end in the area between a perimeter and a central area/nipple of the

weld end as compared to a welding stud having a nipple and a generally planar surface thereabout. Neither Irimies or Franz disclose a welding stud having an increased resistance to current flow between a perimeter and a central area of the second end as compared to a welding stud having a nipple and a generally planar surface thereabout. That is to say, the weld end shown in Figs. 6(j) and 6(m) of Franz does not have any area between the perimeter and the nipple 13 that is in contact with a workpiece which would have an increased resistance to current flow. As such, claims 18 and 25, and the claims dependent therefrom, are patentably distinct over the combination of Irimies and Franz. Furthermore, Applicant believes that the other applied references also do not teach, disclose, or suggest a welding stud that includes a weld end that increases resistance and localizes current flow through the weld end in the area between a perimeter and a central area/nipple of the weld end as compared to a welding stud having a nipple and a generally planar surface thereabout.

Regarding the rejection of claim 28, Applicant has elected to amend claim 28 to further clarify what is being called for therein. As amended, claim 28 calls for, in part, a welding stud that includes a second end having a weld face with a nipple extending therefrom and constructed thereabout with at least a portion of the weld face having decreased arc surface area, wherein the nipple is in the same plane as the weld face having decreased arc surface area. As shown in Figs. 6(j) and 6(m) of Franz, the end face 13 includes a nipple 13 that is not in a common plane with the weld face that has a decreased surface area. Rather, end face 13 extends beyond peaks 15, 17 of the weld face. As such, the combination of Irimies and Franz fails to teach, disclose, or suggest that which is called for in claim 28. Therefore, Applicant respectfully believes that claim 28 is patentably distinct over the cited references.

Claim 29 was also rejected and calls for, in part, a second end of a welding stud as having a surface that is constructed with at least one protrusion arranged to face a workpiece and a remaining surface that is configured with a contact area that is decreased compared to a planar surface. The second end of the stud in Franz does not have a “remaining surface” that is configured with a contact area besides the nipple. The only portion of the second end in Franz that contacts a workpiece is the nipple, and as such, there can be no other surface on the second end that could be considered a contact area with a workpiece. As such, Franz fails to teach or suggest that which is called for in claim 29. Furthermore, Applicant believes that none of the other applied references teaches, discloses, or suggests a welding stud having a surface that is constructed with at least one protrusion arranged to face a workpiece and a remaining surface that is configured with a contact area that is decreased compared to a planar surface.

In light of the above arguments, Applicant believes that claims 1-29 are also patentably distinct over the Examiner's additional rejections of claims 1-29 under 102(b) over each of six separate references. That is, the amendments to claims 1, 10, and 28 further serve to distinguish those claims from the cited references and, regarding the other non-amended remaining claims, arguments set forth in the response filed on July 18, 2006 sufficiently address rejections set forth by the Examiner.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-29.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

/Kevin R. Rosin/

<sup>1</sup> Kevin R. Rosin  
Registration No. 55,584  
Phone 262-268-8100 ext. 15  
krr@zpspatents.com

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**P.O. ADDRESS:**

Ziolkowski Patent Solutions Group, SC  
136 South Wisconsin Street  
Port Washington, WI 53074  
262-268-8100

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<sup>1</sup>The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2623. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2623. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 50-2623.